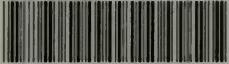


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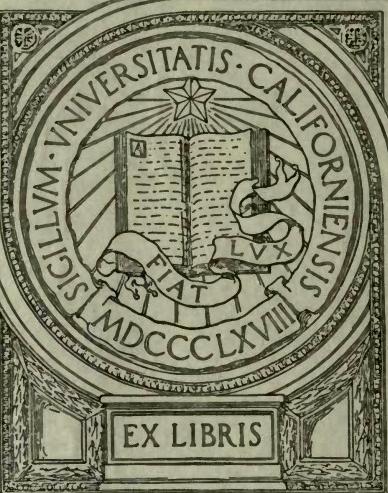
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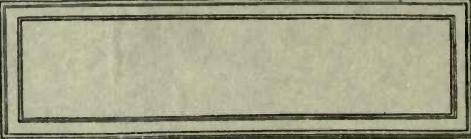
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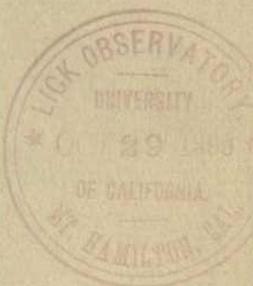
LITERATURE OF DIDYMUM

1842-1893

BY

A. C. LANGMUIR, PH. D.

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LETTER OF TRANSMITTAL.

NEW YORK, JULY 24, 1894.

The Committee of the American Association for the Advancement of Science having charge of Indexing Chemical Literature has voted to recommend to the Smithsonian Institution for publication the three following Indexes:—

AN INDEX TO THE LITERATURE OF CERIUM.¹

AN INDEX TO THE LITERATURE OF LANTHANUM.¹

Both by W. H. Magee, Ph. D.

AN INDEX TO THE LITERATURE OF DIDYMUM.

By A. C. Langmuir, Ph. D.

The latter has already appeared in the School of Mines Quarterly, No. 1,
Vol. XV.

H. CARRINGTON BOLTON,
Chairman.

To the SECRETARY of the SMITHSONIAN INSTITUTION.

¹ These Indexes are printed as Smithsonian Publication No. 971.

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INDEX TO THE LITERATURE OF DIDYMIUM — 1842-1893.

By A. C. LANGMUIR, PH.D.

THE following paper is offered to chemists with the hope that it may be of some value to them in their researches on an element of great theoretical and scientific interest, particularly as an example of the wonderful results accomplished by the use of the spectroscope in modern chemistry. The voluminous literature of didymium affords a striking illustration of the pursuit of science for its own sake, and with no reward beyond the satisfaction of having advanced the cause of truth.

Original work, at the present time, must always be preceded by a long and painstaking search through the literature, which consumes no inconsiderable amount of time. Anything which can lighten the labors of the investigator in this direction is sure to be a welcome addition to the literature.

In 1882 Dr. H. Carrington Bolton originated the idea of indexing the literature of each of the chemical elements, and a Committee on Indexing Chemical Literature was appointed by the American Association for the Advancement of Science. The committee annually reports the progress made during the year, the reports being published in the *Chemical News* and in American journals.

The following elements have been indexed: —

Columbium. — Index to the literature of, 1801-1887, by Frank W. Traphagen, Smithsonian Miscellaneous Collections, No. 663, Washington, 1888.

Iridium.—Bibliography of the metal, 1803–1885, by N. W. Perry, in Mineral Resources of the United States, 1883–1884, p. 588; School of Mines Quarterly, 1885, p. 114; Chem. News, 1885, 51, p. 32.

Manganese.—Index to the literature of, 1596–1874, by H. C. Bolton, Annals of the Lyceum of Natural History, New York, Vol. II., Nov., 1875.

Titanium.—Index to the literature of, 1783–1876, by E. J. Hallock, Annals of the New York Academy of Sciences, Vol. I., Nos. 2 and 3, 1877.

Uranium.—Index to the literature of, by H. C. Bolton, 1789–1885, Smithsonian Reports for 1885, Washington, 1885, p. 919–946.

Vanadium.—Index to the literature of, 1801–1876, by G. Jewett Rockwell, Annals of the New York Academy of Sciences, Vol. I., No. 5, 1877.

The general plan of the following index corresponds with that of the others published. The indexes at the end of every volume of each journal were consulted, unless an index covering a series of years was available. The French journals proved to be very troublesome in this respect, as indexes at the end of the volume are often omitted, and the general indexes are seldom detailed enough to be of much value. This was especially true of the *Bull. Soc. Chim.* and the *Ann. Chim. Phys.*.

The abbreviations used are those given by H. Carrington Bolton in his "Select Bibliography of Chemistry, 1492–1892," Smithsonian Miscellaneous Collections, No. 840, Washington, 1893.

Date.	Author.	Remarks.	References.
1842	MOSANDER . . .	Discovery.	Ann. Chem., Liebig, 44, 125. Ann. der Phys., Pogg., 56, 503. Pharm. Centrbl., 1842, 793. J. de Pharm., 1843, 143. Berzelius' Jsb., 1844, 144. J. Frank. Inst. [3], 5, 411. Am. J. Sci., 43, 404.
1843	MOSANDER . . .	Researches.	Phil. Mag. [3], 23, 241. Ann. Chem., Liebig, 48, 210-223. J. prakt. Chem., 30, 276-288. Ann. de Phys., Pogg., 60, 299-311. Ann. chim. phys. [3], 11, 464.
1843	L. BONAPARTE .	Separation from cerium.	Compt. rend., 16, 1008. J. prakt. Chem., 29, 268. Pharm. Centrbl., 1843, 719. Berzelius' Jsb., 1845, 115. Ann. der Phys., Pogg., 59, 623. Chem. Gaz., 1843, 405. Chemist, Watt, 4, 293. Am. J. Sci., 46, 206.
1845	HERMANN . . .	Existence of Di doubted.	J. prakt. Chem., 34, 182. Berzelius' Jsb., 1845, 115.
1849	MARIGNAC . . .	Separation from cerium & lanthanum. At'mic weight.	Arch. ph. nat., 11, 21. Ann. Chem., Liebig, 71, 306. Ann. chim. phys. [3], 27, 209. J. prakt. Chem., 48, 423. Pharm. Centrbl., 1849, 837. Chemist, Watt, 1849, 20. Chem. Gaz., 1849, 329. Jsb., 1849, 263, 265.
1850	H. WATTS . . .	Sep'r'tion fr'm cerium and lanthanum.	J. Chem. Soc., 2, 140. Pharm. Centrbl., 1849, 892.
1853	MARIGNAC . . .	Separation from lanthanum. At'mic weight. Compounds.	Ann. chim. phys. [3], 38, 148-177. J. prakt. Chem., 59, 380-406. Arch. ph. nat., 24, 278. Ann. Chem., Liebig, 88, 232. J. Chem. Soc., 6, 260-273. Chem. Gaz., 1854, 141-148. Am. J. Sci. [2], 16, 413. Jsb., 1853, 346-343.
1856	MARIGNAC . . .	Cryst'lline f'm of sulphate.	Compt. rend., 42, 288. Pharm. Centrbl., 1856, 179.
1857	GLADSTONE . . .	Optical test.	J. Chem. Soc., 10, 219. J. prakt. Chem., 73, 380. Am. J. Sci. [2], 25, 100. Jsb., 1857, 568.
1859	MARIGNAC . . .	Compounds.	Ann. min. [5], 15, 272. Jsb., 1859, 138.

Date.	Author.	Remarks.	References.
1860	STAPFF	Sep'r'tion fr'm lanthanum.	J. prakt. Chem., 79, 257. Chem. News, 2, 196.
1860	HERMANN	Researches.	Bull. de la Soc. des Naturalistes à Moscou, 1860, 4, 543. J. prakt. Chem., 82, 385-395. Pharm. Centrbl., 1861, 433-438. Arch. ph. nat., 11, 354. Chem. News, 4, 72-87. Jsb., 1861, 195.
1861	NORDENSKIÖLD .	Crystalline form of oxide.	Ann. der Phys., Pogg., 114, 618. Oefvers. K. Vet. Acad. Forhandl., 1860, 439. J. prakt. Chem., 85, 432. Pharm. Centrbl., 1862, 556.
1861	RAMMELSBERG .	Isomorphism of didymium with other sulphates.	Ber. der Akad. der Wissenschaften zu Berlin, 1861, 891. J. prakt. Chem., 85, 79. Ann. der Phys., Pogg., 115, 580. Ztschr. Chem., 5, 376. Pharm. Centrbl., 1862, 25. Chem. News, 5, 139.
1862	ERDMANN	Abs'pt'n sp'm.	J. prakt. Chem., 85, 394.
1862	O. N. ROOD . . .	Absorption spectrum.	Am. J. Sci. [2], 34, 129. Ann. der Phys., Pogg., 117, 350. Chem. News, 6, 140.
1864	POPP	Separation from cerium.	Ann. Chem., Liebig, 131, 359. Bull. soc. chim., 3, 385.
1864	BUNSEN	Absorption spectrum.	Ann. Chem., Liebig, 131, 255. Arch. ph. nat., 21, 384. Phil. Mag. [4], 28, 246. Jsb., 1864, 108.
1864	DAMOUR and DEVILLE.	Estimation and separat'n.	Compt. rend., 59, 270. Instit., 1864, 269. Bull. soc. chim. [2], 2, 339. Chem. News, 10, 230. Jsb., 1864, 704.
1864	W. GIBBS	Separation from cerium.	Am. J. Sci. [2], 37, 352. Ztschr. anal. Chem., 3, 394. J. prakt. Chem., 94, 123.
1864	HERMANN	Sep'r'tion fr'm the thorium earths.	Bull. soc. chim., 4, 360. J. prakt. Chem., 93, 106.
1865	WILLIAMS	Occurrence in churchite.	Chem. News, 12, 183.
1865	DELAFONTAINE .	Absorption spectrum.	Arch. ph. nat., 21, 97. Ann. der Phys., Pogg., 124, 635. Ann. Chem., Liebig, 135, 194. J. prakt. Chem., 94, 303.

Date.	Author.	Remarks.	References.
1865	DELAFONTAINE .	Absorption spectrum.	Ztschr. Chem., 8, 266. Bull. soc. chim., 3, 417.
1865	WINKLER	Sep'r'tion fr'm lanthanum.	J. prakt. Chem., 95, 410. Ztschr. anal. Chem., 4, 417. Chem. Centrbl., 1865, 1007. Bull. soc. chim., 6, 204. Chem. News, 15, 178.
1866	BUNSEN	Absorption spectrum.	Ann. der Phys., Pogg., 128, 100-108. Phil. Mag. [4], 32, 177-182. Ztschr. Chem., 1866, 419.
1866	BUNSEN	Estimation by means of spectrum.	Ztschr. anal. Chem., 5, 109. Ann. Chem., Liebig, 137, 1. J. prakt. Chem., 99, 274. Ztschr. Chem., 1866, 72. Chem. Centrbl., 1866, 118. Ztschr. anal. Chem., 5, 109. Ann. chim. phys. [4], 9, 487. Bull. soc. chim. [2], 6, 18. Arch. ph. nat., 25, 113. Am. J. Sci. [2], 41, 399. Jsb., 1866, 799.
1866	HERMANN	Sep'r'tion fr'm zircon earths.	J. prakt. Chem., 97, 340.
1867	PATTISON and CLARK.	Separation from cerium.	Chem. News, 16, 259. Ztschr. anal. Chem., 8, 249.
1867	MARIGNAC	Separation in æschynite.	Ztschr. Chem., 11, 191. Arch. ph. nat., May, 1867.
1869	ZSCHIESCHE	Salts; equivalent of oxide.	Ztschr. Chem., 10, 725. J. prakt. Chem., 107, 74. Bull. soc. chim., 13, 232. Ztschr. Chem., 13, 40. Ztschr. anal. Chem., 9, 540. Jsb., 1869, 259.
1869	THALEN	Measurement of spectrum.	Nova Acta Reg. Soc. Sc. Upsal [3], vol. 6.
1869	HERMANN	Occurrence in mineral kingdom.	Ann. chim. phys. [4], 18, 238. J. prakt. Chem., 107, 140.
1870	ERK	At'mic weight. Separation from lanthanum and yttrium.	Jenaische Ztschr. Med. Nat., 6, 299. Ztschr. Chem. [2], 7, 101-115. Ztschr. anal. Chem., 10, 476, 509. J. Chem. Soc., 1871, 494. Bull. soc. chim., 16, 84.
1870	W. GIBBS	Sulphate . . .	Ber., 1870, 858.
1870	RAMMELSBERG . . .	Occurrence in yttrocerite.	Ber., 1870, 858.

Date.	Author.	Remarks.	References.
1872	YOUNG	Occurrence in the sun.	Am. J. Sci. [3], 4, 356. Jsb., 1872, 147.
1872	HORNER	Occurrence in pyromorphite.	Chem. News, 26, 109, 285. J. Chem. Soc., 25, 995. Bull. soc. chim., 19, 23. Jsb., 1872, 241.
1872	CHURCH	Didymium in British min'l's.	Chem. News, 26, 130.
1872	RAMMELSBERG	Determinat'n in tantalites & columbites.	J. Chem. Soc., 25, 1075. J. Chem. Soc., 25, 194.
1873	MARIGNAC	Crystallographic forms of salts.	Ann. chim. phys. [4], 30, 56. Jsb. rein. Chem., 1873, 57. Bull. soc. chim., 20, 84.
1873	MENDELEJEFF	Position in periodic system.	J. Chem. Soc., 27, 25. Ann. Chem., Liebig, Suppl., 8, 190. Ann. Chem., Liebig, 168, 45-63. Ber., 1873, 558.
1873	HORNER	Occurrence in scheelite.	J. Chem. Soc., 26, 1004. Chem. News, 28, 282. J. Chem. Soc., 27, 345. Bull. soc. chim., 21, 275. Jsb. rein. Chem., 1874, 77.
1873	STOLBA	Salts	J. de Pharm. [4], 19, 494. Ber. der königl. böhm. Ges. der Wissenschaft., Nov., 1873. Ztschr. anal. Chem., 13, 59. Jsb. rein. Chem., 1874, 77. Jsb., 1873, 260.
1873	CARLSON	Plat'noy'n'de	Ber., 1873, 1468.
1873	RAMMELSBERG	Isomorphism of sulphate with cadmium sulphate.	Ber., 1873, 87.
1873	THALEN	Spectrum . . .	K. Svensk. Vet. Acad. Handl., 1873, 12, No. 4. Bull. soc. chim. [2], 22, 350. Jsb. rein. Chem., 1874, 75.
1874	FRERICHS	Compounds. Separation from lanthanum.	Ber., 1874, 798. Ztschr. anal. Chem., 13, 317. Bull. soc. chim., 22, 498. J. Chem. Soc., 27, 1062. Am. Chemist, 5, 264. Jsb. rein. Chem., 1874, 76. Jsb., 1874, 256.
1874	TOPSOE	Crystallographic investigations.	K. Svensk. Vet. Acad. Handl., 1874, No. 5. Bull. soc. chim., 22, 353.

Date.	Author.	Remarks.	References.
1874	TOPSOE	Crystallographic investigations.	Jsb. rein. Chem., 1874, 77.
1874	CLEVE	Researches.	K. Svensk. Vet. Acad. Handl., 2, No. 8. Bull. soc. chim. [2], 21, 246. Chem. News, 30, 21. J. Chem. Soc., 28, 34. Jsb. rein. Chem., 1874, 77. Jsb., 1874, 257.
1874	CLEVE	Sep'r'tion fr'm lanthanum.	Bull. soc. chim. [2], 21, 196.
1874	HARTLEY	Dissociation of solutions.	Arch. ph. nat., 50, 212. Lond. R. Soc. Proc., 22, 241. Chem. News, 29, 148. Ber., 1874, 140. Jsb., 1874, 97.
1874	THOMSEN	Heat of neutralization of oxyhydrate.	Ber., 1874, 31. Chem. News, 29, 155. J. Chem. Soc., 27, 430. Jsb., 1874, 118.
1875	HILLEBRAND and NORTON.	Metallic didymium.	Ann. der Phys., Pogg., 156, 466. Chem. Centrbl., 1875, 642. J. Chem. Soc., 30, 276. Jsb., 1875, 466.
1875	BUHRIG	Detection of traces by spectrum.	Am. J. Sci. [3], 12, 53. J. prakt. Chem. [2], 12, 209.
1875	CLEVE	At'mic weight.	Ber., 1875, 129.
1875	PHILLIPS	At'mic weight.	Chem. News, 32, 176.
1875	BUNSEN	Electrolytic separation from Ce and La.	Ann. der Phys., Pogg., 155, 633.
1875	BUNSEN	Absorption spectrums.	Ann. der Phys., Pogg., 155, 378. Ztschr. anal. Chem., 15, 93.
1875	NILSON	Valency, sel-enide.	Am. J. Sci. [3], 11, 142. Ber., 1875, 659.
1876	NILSON	Valency, chloroplatinate.	Ber., 1876, 1058, 1145. Jsb., 1876, 292.
1876	HILLEBRAND . . .	Specific heat.	Ann. der Phys., Pogg., 158, 75. Phil. Mag. [5], 3, 111. J. Chem. Soc., 31, 50. Jsb. rein. Chem., 1876, 74. Jsb., 1876, 74.
1876	RAMMELSBERG .	At'mic weight.	Ber., 1876, 1580. Jsb., 1876, 240.

Date.	Author.	Remarks.	References.
1876	WYROUBOFF . . .	Ferrocyanide.	Ann. chim. phys. [5], 8, 456. Jsb., 1876, 312.
1876	NILSON	Platinonitrite.	Ber., 1876, 1728.
1876	PETTERSSON . . .	Molecular volume.	Ber., 1876, 1566.
1877	DELAFONTAINE .	Occurrence in N.C.s'm'rsk'te	Arch. ph. nat., 59, 176. Jsb., 1877, 251.
1877	CLEVE	Compounds.	Bull. soc. chim. [2], 29, 492. Ber., 1878, 910.
1878	STOLBA	Sep'r'tion fr'm cerium and lanthanum.	Jsb. rein. Chem., 1878, 80. Böhm. Ges. d. Wissensch., 1878. Jsb., 1878, 1059.
1878	BOISBAUDRAN . .	Occurrence in rhabdophan.	Compt. rend., 86, 1028. Ztschr. Kryst., 3, 191. Jsb., 1878, 1228.
1878	FRERICHS and SMITH.	Researches.	Ann. Chem., Liebig, 191, 331-366. Ber., 1878, 804. Chem. Centrbl., 1878, 386. Chem. News, 37, 250; 38, 59. J. Chem. Soc., 34, 647. Jsb. rein. Chem., 1878, 79.
1878	FRERICHS	Compounds.	Ber., 1878, 1151. J. Chem. Soc., 34, 934. Jsb. rein. Chem., 1878, 80.
1878	DELAFONTAINE .	Didymium in N. C. samarskite.	Compt. rend., 87, 632. Cheni. News, 38, 223. Jsb., 1878, 259.
1878	DELAFONTAINE .	Probable compound nature of didymium from cerite.	Compt. rend., 87, 634. Ber., 1879, 364. Chem. Centrbl., 1878, 802. J. Chem. Soc., 36, 119. Monit. Sc Quesneville, 20, 1393. Jsb. rein. Chem., 1878, 79. Jsb., 1878, 259.
1878	NILSON	Platino-iodo-nitrate.	Ber., 1878, 885.
1878	CLAES	Absorption spectrum.	Ann. der Phys., Pogg. [2], 3, 404.
1878	COSSA	Wide occurrence of didymium.	Gazz. chim. ital., 9, 118-140. J. Chem. Soc., 36, 696. Chem. News, 38, 164. Jsb. rein. Chem., 1878, 80.
1878	SORET	Absorption of ultra-violet rays.	Arch. ph. nat. [2], 63, 89. Compt. rend., 86, 1062.
1879	BOISBAUDRAN and J. L. SMITH.	Absorption spectrum.	Compt. rend., 88, 323, 1167. Monit. Sc. Quesneville, 21, 450. Chem. Centrbl., 1879, 258, 483.

Date.	Author.	Remarks.	References.
1879	BOISBAUDRAN and J. L. SMITH.	Absorption spectrum.	J. Chem. Soc., 36, 696, 861. Chem. News, 39, 286. Jsb., 1879, 165. Ber., 1879, 841, 2080.
1879	CLEVE	Chloro-stannate didymi'm a simple body.	Bull. soc. chim. [2], 31, 197. J. Chem. Soc., 36, 602. Jsb., 1879, 286.
1879	SCHUCHARDT . . .	Metallic didymium.	Chem. News, 40, 35.
1879	COSA	Occurrence in scheelite, etc.	Compt. rend., 87, 377. Ber., 1879, 362. Chem. Centrbl., 1879, 128. Jsb. Min., 1879, 615. Ztschr. Kryst., 3, 447. Chem. News, 40, 90. Jsb., 1879, 1179.
1879	COSA	Detection in minerals.	Ztschr. Kryst., 3, 325.
1879	SORET	Absorption spectrum.	Jsb. rein. Chem., 1879, 66. Compt. rend., 88, 422.
1879	SELLA	Fluorescence of salts.	Ber., 1879, 1019, 2078. Chem. Centrbl., 1819, 308.
1879	KOPP	Tungstate.	R. Acad. Lincei, 3, 26. Ztschr. Kryst., 3, 631. Jsb. rein. Chem., 1879, 66. Chem. News, 40, 90. Ber., 1879, 909.
1879	STOLBA	At'mic weight. Isomorphism.	Ber., 1879, 1019, 2078. Chem. Centrbl., 1879, 595.
1880	E. F. SMITH . . .	Separation of cerium and didymium.	
1880	MARIGNAC	Electrolytic estimation.	Ber., 1880, 754.
1880	NILSON	Occurrence in samarskite.	Arch. ph. nat. [3], 3, 413. Compt. rend., 90, 899. Ann. chim. phys. [5], 20, 535. Chem. Centrbl., 1880, 356. Jsb. rein. Chem., 1880, 73. Jsb., 1880, 295.
1880	NILSON and PETTERSSON.	Occurrence in euxenite and separation.	Ber., 1880, 1430, 1439. Compt. rend., 91, 57. Jsb., 1880, 300.
1880	PERONI and SCHIAPARELLI.	Molecul'r heat and volume.	Ber., 1880, 1459. Compt. rend., 91, 232. Jsb., 1880, 237.
1880	COSA	Occurrence in urine.	Gazz. chim. ital., 10, 390. Jsb., 1880, 1114.
1880	COSA	Occurrence in urine.	Gazz. chim. ital., 10, 465. Ber., 1880, 2414.

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1880	COSSA	Occurrence in urine.	Jsb., 1880, 293.
1880	COSSA	Tungstate.	Gazz. chim. ital., 10, 467. Ber., 1881, 107. J. Chem. Soc., 40, 225. Jsb., 1880, 293.
1880	SORET	Spectrum.	Compt. rend., 91, 378. Chem. Centrbl., 1880, 662. Jsb., 1880, 210.
1880	SORET	Ultra violet absorption spectrum.	Jsb. rein. Chem., 1880, 74. Arch. ph. nat. [3], 4, 261. Jsb., 1880, 214.
1881	CLARKE	At'mic weight.	Am. Chem. J., 3, 263. Phil. Mag. [5], 12, 101. Jsb., 1881, 7.
1881	BRAUNER	Valency pent-oxide.	Chem. Ztg., 1881, 791.
1881	CROOKES	Phosphorescence of oxide.	Lond. R. Soc. Proc., 32, 206. Ann. chim. phys. [5], 23, 555. Compt. rend., 92, 1281. Chem. News, 43, 237. Jsb., 1881, 131.
1882	BRAUNER	Researches.	Sitzb. Akad., Wien [2], 84, 1165 ; 86, 168. Monatsh. Chem., 3, 1-60, 486-503. Compt. rend., 94, 1718. Ann. der Phys., Pogg., Beibl., 6, 418. Ber., 1882, 109, 115, 2231. Chem. Centrbl., 1882, 616. Monit. Sc., Quesneville [3], 12, 595, 794. J. Chem. Soc., 41, 68. Chem. News, 46, 16. Jsb., 1882, 283, 285.
1882	CLARKE	At'mic weight.	Am. Chem. J., 4, 76.
1882	HARTLEY	Separation from cerium.	Chem. News, 45, 40.
1882	STOLBA	Volumetric estimation.	Chem. Centrbl., 1882, 151. Chem. Centrbl., 1882, 826.
1882	BOISBAUDRAN	Separation from gallium.	Jsb., 1882, 1286. Compt. rend., 94, 1439. Jsb., 1882, 1296.
1882	CLEVE	Preliminary note.	Compt. rend., 94, 1528. Monit. Sc., Quesneville, 24, 689. Chem. Centrbl., 1882, 451. Ber., 1882, 1750. Chem. Ztg., 1882, 658.

Date.	Author.	Remarks.	References.
1882	CLEVE	Preliminary note.	J. Chem. Soc., 44, 18. Chem. News, 45, 273.
1882	CLEVE	At'mic weight.	Compt. rend., 95, 33. Monit. Sc., Quesneville, 1882, 798. Chem. Centrbl., 1882, 616.
1883	CLEVE	At'mic weight.	J. Chem. Soc., 42, 1165. Chem. News, 46, 43. Bull. soc. chim. [2], 39, 289. Ber., 1883, 1212. J. Chem. Soc., 44, 852. Chem. News, 47, 203. Jsb., 1883, 37.
1883	CLEVE	Separation from samarium.	Compt. rend., 97, 94. Ber., 1883, 2494. J. Chem. Soc., 43, 362. Chem. News, 48, 39, 74. Jsb., 1883, 361.
1883	WELSBACH . . .	Sep'r'tion fr'm other gadolinite earths.	Monatsh. Chem., 4, 630-642.
1883	ARCHE	Preparation from cerite.	Monatsh. Chem., 4, 913-925. J. Chem. Soc., 46, 557.
1883	STOLBA	Estimation as oxalate.	Chem. Centrbl., 1883, 313.
1883	BECQUEREL . . .	Absorption and emission spectrum.	Compt. rend., 96, 1217. Jsb., 1883, 243.
1883	BRAUNER	Preparation from cerite.	J. Chem. Soc., 43, 278-289. Monit. Sc. Quesneville [3], 12, 595-625; 13, 160. Ber., 1883, 1860. Jsb., 1883, 354.
1883	J. L. SMITH . . .	Occurrence in samarskite. Estimation by spectroscope.	Am. Chem. J., 5, 80. Chem. News, 48, 13, 29. J. Chem. Soc., 46, 111. Ber., 1883, 1886. Jsb., 1883, 1562.
1883	DEBRAY	Separation from cerium.	Compt. rend., 96, 828.
1883	THALEN	Spectrum.	Chem. News, 47, 199. Ann. der Phys., Pogg., Beibl., 7, 893. Oefvers. konigl. Vet. Forhandl., v. 7. Ber., 1883, 2760.
1884	HAUSHOFER	Microscopic test.	Ber. bair. akad. Wissensch., 13, 436-448. Jsb., 1884, 1551.

Date.	Author.	Remarks.	References.
1884	ROBINSON	Separation from cerium and lanthanum.	Lond. R. Soc. Proc., 37, 150. Chem. News, 50, 251. Jsb., 1884, 50.
1884	WELSBACH . . .	Separation from cerium, lanthanum, and yttrium.	Sitzb. Akad., Wien [2], 90, 337. Monatsh. Chem., 5, 508-522. Jsb., 1884, 395.
1884	COSSA	Molybdate. Valency.	Compt. rend., 98, 990. J. prakt. Chem. [2], 29, 383. Ber., 1884, 249. Chem. Centrbl., 1884, 452. J. Chem. Soc., 46, 821. Jsb., 1884, 395.
1884	COSSA	Diffusion of didymium.	Gazz. chim. ital., 13, 280.
1884	CLARKE	At'mic weight.	J. Chem. Soc., 46, 262. Chem. News, 50, 21.
1884	HÖGBOM	Tungstate.	Chem. Ztg., 1884, 1038.
1884	MARIGNAC	Equivalent weight.	Bull. soc. chim. [2], 42, 3. Arch. ph. nat. [3], 10, 5, 193. Ztschr. anal. Chem., 23, 140. Chem. News, 50, 69.
1885	J. L. SMITH . . .	Estimat'n separation from other earths.	Chem. News, 51, 289, 304. Ber., 1885, 515. Jsb., 1885, 1932.
1885	LINNEMANN . . .	Abs'pt'n lines of didy'm in some zircons.	Monatsh. Chem., 6, 533.
1885	WELSBACH . . .	Decomposit'n into constituents. Researches.	Monatsh. Chem., 6, 477-491. Chem. Centrbl., 1885, 774. Ber., 1885, 605. Chem. Ztg., 1885, 997. J. Chem. Soc., 48, 1113. Chem. News, 52, 49. Jsb., 1885, 478.
1885	CLEVE	Oxides.	Bull. soc. chim. [2], 43, 56.
1885	HOOD	Absorption spectrum.	Chem. News, 52, 271.
1885	CLEVE	Researches.	* Bull. soc. chim. [2], 43, 359-366. Chem. News, 52, 227, 255, 264, 278, 291. Ber., 1885, 52, 318. J. Chem. Soc., 48, 1039. Chem. Centrbl., 1886, 69.
1885	LOMMELL	Fluorescence.	Ann. der Phys., Pogg. [2], 24, 288. Jsb., 1885, 333.
1885	PICCINI	Position in periodic system.	Atti d. Acc. d. Lincei, 1885, 82. Ber., 1885, 255. Jsb., 1885, 359.

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1886	STROHECKER . . .	Occurrence in clays of Hainstadt.	J. prakt. Chem. [2], 33, 133. Chem. News, 53, 136. Jsb., 1886, 407.
1886	CROOKES	Absorption spectrum.	Lond. Roy. Soc. Proc., 40, 502. Chem. News, 54, 27. Ber., 1886, 652. Jsb., 1886, 308.
1886	DEMARÇAY	Spectrum.	Compt. rend., 102, 1551. Ber., 19, 650. J. Chem. Soc., 50, 837. Chem. News, 54, 36. Jsb., 1886, 311.
1886	MORTON	Crystalline form of compounds.	Oefers. königl. Vet. Forhandl., 1885, 189-199. Ztschr. Kryst., 12, 517. Ber., 1886, 388. Jsb., 1886, 402.
1886	HUMPIDGE	Spectrum.	Chem. News, 53, 154.
1886	HARTLEY	Spectrum.	Chem. News, 53, 179.
1886	COSSA	Tungstate and molybdate.	Atti d. Acc. d. Lincei, 1886, 320. Gazz. chim. ital., 16, 284. Compt. rend., 102, 1315. Ber., 1886, 482, 536. J. Chem. Soc., 50, 981. Chem. Centrbl., 1887, 1371. Ztschr. Kryst., 13, 299.
1886	PLAATS	At'mic weight.	Ann. chim. phys. [6], 7, 501. Ztschr. anal. Chem., 26, 276.
1887	BAILEY	At'mic weight.	J. Chem. Soc., 51, 682. Jsb., 1887, 53.
1887	BECQUEREL	Absorption spectrum.	Compt. rend., 104, 168, 777, 1691. Ber., 1887, 246, 457. Chem. News, 55, 148; 56, 23. J. Chem. Soc., 52, 537, 873. Jsb., 1887, 352.
1887	DEMARÇAY	Absorption spectrum.	Compt. rend., 105, 276. Ber., 1887, 533. J. Chem. Soc., 52, 1008. Chem. News, 56, 114. Jsb., 1887, 353.
1887	KRÜSS and NILSON.	Didymium composed of nine elements.	Ber., 1887, 2134. Chem. News, 56, 166. Jsb., 1887, 474.
1887	BAILEY	Absorption spectrum.	Ber., 1887, 2769. Jsb., 1887, 474.
1887	KRÜSS and NILSON.	Occurrence in fergusonite.	Ber., 1887, 1679. Jsb., 1887, 574.

Date.	Author.	Remarks.	References.
1887	WILLGERODT . . .	Application as a chloridizing agent.	J. prakt. Chem. [2], 35, 395. Jsb., 1887, 618.
1887	C. M. THOMPSON.	Absorption spectrum of components.	Chem. News, 55, 277.
1887	OUVRARD	Phosphate.	Compt. rend., 107, 39. Bull. soc. chim. [3], 51, 42. Chem. Centrbl., 1888, 1078. J. Chem. Soc., 54, 1037. Ber., 1888, 2310, 2320.
1888	KIESEWETTER and KRÜSS.	Spectrum.	Eng. Mining J., 46, 1.
1888	Application.	Chem. News, 60, 27.
1889	CROOKES	Absorption spectrum of components.	J. Chem. Soc., 55, 259.
1889	BETTENDORFF . . .	Sep'r'tion fr'm lanthanum.	Ann. Chem., Liebig, 256, 163.
1891	BETTENDORFF . . .	Preparation from orthite.	Ann. Chem., Liebig, 263, 164.
1891	KRÜSS	Separation from erbium.	Ann. Chem., Liebig, 265, 1-27. Ber., 1891, 700.
1891	GLADSTONE	Molecular refraction of salts.	J. Chem. Soc., 60, 1425. J. Chem. Soc., 59, 595.
1891	BEHRENS	Microscopic reactions.	Ztschr. anal. Chem., 30, 144.
1891	HARTINGER	Absorption and emission spectrum.	Monatsh. Chem., 12, 362-367.
1891	C. M. THOMPSON.	Didymium from different sources.	Chem. News, 64, 167. Chem. Centrbl., 1891, 792. Ber., 1891, 945.
1892	SCHOTTLÄNDER .	Separation from lanthanum and cerium; spectrum.	Ber., 1892, 378-394, 569-599. Chem. News, 65, 205, 219, 233, 243, 254. Chem. Centrbl., 1892, 661.
1893	KRÜSS	Electrolysis of solutions.	Ztschr. anorg. Chem., 3, 60. Chem. Centrbl., 1893, 382. Chem. News, 67, 65. Ber., 1893, 249.
1893	KRÜSS	Equivalent.	Ztschr. anorg. Chem., 3, 58. Chem. News, 67, 32, 40. Ber., 1893, 249.
1893	KRÜSS and LOOSE.	Behavior toward pot'ssi'm chromate.	Ztschr. anorg. Chem., 3, 92. Chem. News, 67, 75, 87, 100. Chem. Centrbl., 1893, 462.

Date.	Author.	Remarks.	References.
1893	KRÜSS and LOOSE.	Behavior toward pot'ssi'm chromate.	Ber., 1893, 250.
1893	KRÜSS	Behavior toward aniline.	Ztschr. anorg. Chem., 3, 108. Chem. Centrbl., 1893, 462.
1893	NORDENSKIÖLD .	Unknown nature of cerite.	Ber., 1893, 251. J. prakt. Chem., 47, 20. Chem. Centrbl., 1893, 339.
1893	EAKINS	Didymium in Texas gadolinite.	Bull. U. S. Geol. Survey, No. 64. Chem. News, 67, 79.

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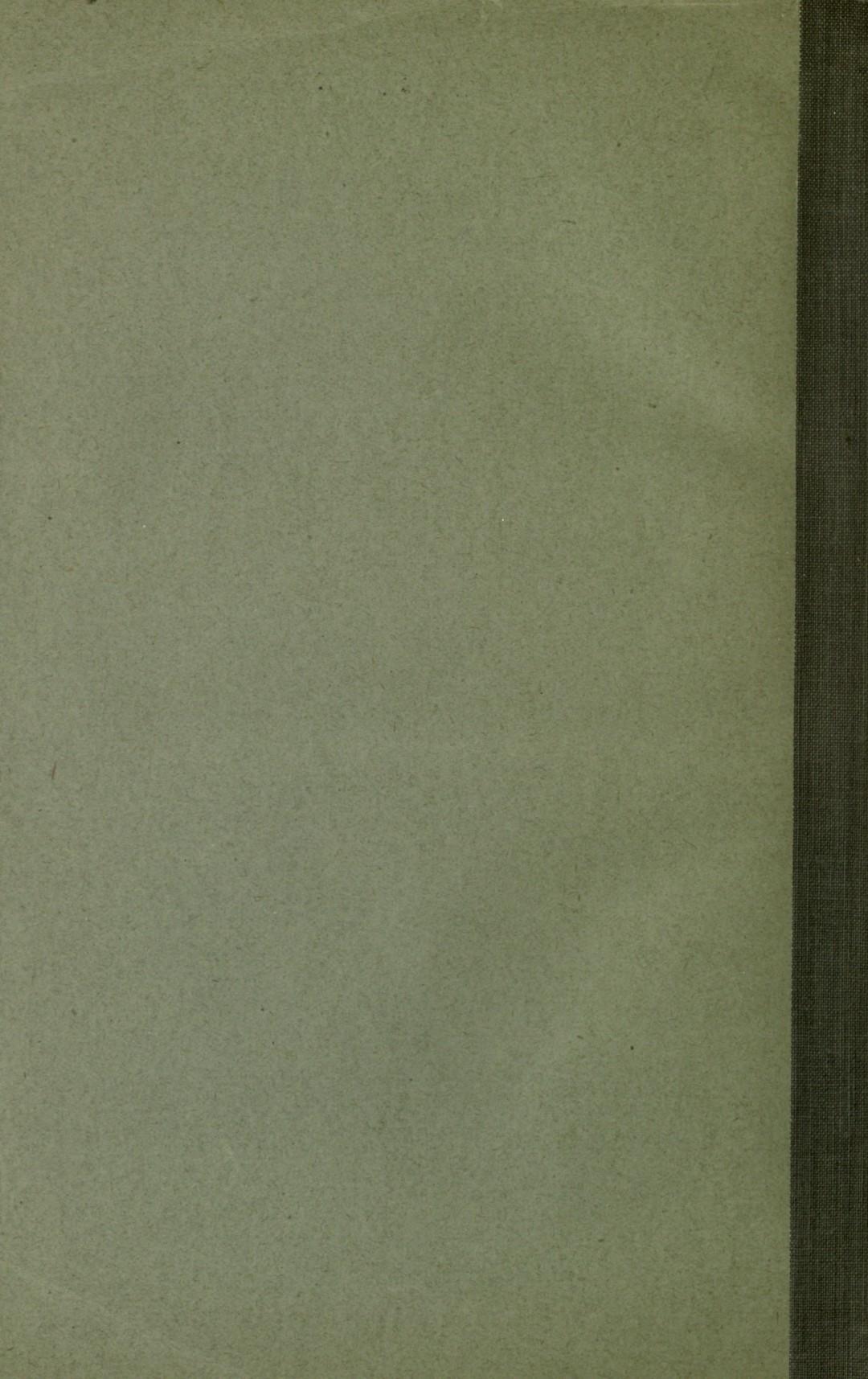
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